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282800

84年7月20日修正
補充

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案 號	84200251
類 別	E04B 2/86

A4
C4

282800

(以上各欄由本局填註)

84.07.19 修正本

發明專利說明書

一、發明名稱	中 文	隔間牆板之改良構造
	英 文	
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	代 表 人 姓 名	

四、中文創作摘要（創作之名稱：隔間牆板之改良構造）

一種隔間牆板之改良構造。

其係由型鋼被豎立固定，由二側設孔被定位元件結合牆板，牆板由週圍形成一環唇緣，唇緣有較小厚度，使二相鄰牆板之唇緣形成凹入之槽溝，其可供膠帶黏合，及以水泥抹平，牆板內壁面形成凹凸之非平面，牆板有數孔，孔可供釘或螺栓植入。

（請先閱讀背面之注意事項再填寫本頁各欄）



英文創作摘要（創作之名稱：

五、創作說明(1)

一種隔間牆板之改良構造，按，公告第二二一三〇八號「室內隔間壁牆之施工方法及其網板」專利案，係將型鋼排列成支柱，再以金屬網釘固於型鋼一側，再穿綁鋼筋並配設水電管路再釘固型鋼另側之金屬網，外側表面釘有金屬網，二金屬網間適當處可以鈎拉鈎防止二金屬網外張，二金屬網間之空間可供灌漿，以形成一隔間壁牆。按，該專利案則係以工地現場架設型鋼及金屬網，以供現場灌漿工作，且此牆面需待水泥漿乾涸後，再由二表面做抹牆、粉刷、油漆等工作。如此，其施工期較長，另外，近遂有以各種材質製成之壁板取代金屬網，其對後續之抹平、粉刷工作雖有較為方便之改進，惟，該種壁板會因無法承受水泥漿之壓力，而致壁板變形崩裂、破損，以致水泥漿流竄，或有壁板與水泥漿咬合不佳之情事。

本案創作之目的，乃在改良上述缺點，以提供一種隔間牆板之改良構造，其係可使水泥漿在灌注後，有適當之孔可供多餘水液滲出，且該牆板與水泥漿間有較為牢固之結合者。

請閱第一圖所示，本案創作係以型鋼1 被豎立固定後，由其二側面可供牆板2 結合，以形成一隔間牆者。

型鋼1 可為習知各種鋼骨建築之金屬樑、柱，其斷面約成U字形狀，由其二豎立邊形成外表面邊，該外表面邊各有孔11，孔11可為一般孔或螺孔，以供拉釘、螺釘等定位元件結合牆板2，型鋼1 本身較大平面，則設有孔12，孔12有較大直徑，可供水泥漿通過，成灌注水泥漿之流動通

(請先閱讀背面之注意事項再填寫本頁)



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五、創作說明(2)

路，且其在架設過程，可由該孔12作各種電線、水管等管路之穿埋。

牆板2 係可為習知各種材質製成，其有較大之平面，該牆板2 由週圍形成有一環唇緣21，且由唇緣21設孔22供定位元件23穿過，以將牆板2 固定在型鋼1，唇緣21係有較小厚度，使二相鄰牆板2 之唇緣21，適形成一凹入之槽溝，其可供膠帶24予以貼黏及以水泥抹平，以使整片牆面有較為美觀、平齊之外表。牆板2 之內側表面係設有凹凸不平之槽道25，此槽道25可成規則或不規則之設置，以形成凹凸之非平面，且此牆板2 設有數較小直徑之孔26，孔26可供設有倒鉤之釘27或螺栓28穿設，因此，當灌注水泥漿後，多餘之水份即可由該孔縫滲出，及當水泥漿乾涸後，釘27或螺栓28可將牆板2 與乾涸之水泥漿牢固結合；再，為使水泥漿易於灌注，可在部份牆板2 上設有較大直徑之孔29，其可被組裝在整片牆之適位，使水泥漿得以被灌注(如第三圖所示)。

由頂部孔29灌入之水泥漿，其係接近於填滿狀態後，即將一邊之灌漿孔29予以封閉，其可用習知各種板予以釘固，且其復可由另側牆板2 之灌漿孔29，以較為乾硬的無收縮性混凝土漿做塞漿工作，使灌漿孔29與頂部橫樑或天花板間可填滿混凝土，此種塞漿工作係屬習知。

請閱第二、三圖所示，本案創作係利用型鋼1、牆板2 被固定後，由頂部牆板2 所設孔29可灌入水泥漿，由於牆板2 上有數孔26，且孔26已植入有釘27或螺栓28，因此，

(請先閱讀背面之注意事項再填寫本頁)

訂

五、創作說明(3)

水液仍可由其間縫隙滲出，使水泥漿易於乾涸，且此滲出水液夾帶有微量水泥漿及砂粒，則，其適可將孔26填滿，或經由適度填補或抹平工作，以使牆板2 有較平坦、美觀外表。

- 5 請閱第四圖所示，當水泥漿乾涸後，牆板2 之唇緣間可用膠帶24予以黏合，且以水泥漿予以填補抹平，因此，牆板2 間有平齊之外表，且唇牆板2 與水泥漿間，因為有釘27或螺栓28之固定，所以，牆板2 與水泥漿可形成一體之牢固結合，所以，牆板2 是不會有脫落之問題。

- 10 本案創作之牆板由於設有數孔26，所以，在灌水泥漿時，水泥漿所含水液可適度滲出，因此，其可減少水泥漿壓力，以防止水泥漿過大壓力，同時，該孔植入有釘或螺栓，及由牆板內壁面設有非平面，所以，牆板與水泥漿壁面有較佳之咬合效果，二者間不會有咬合不佳造成脫落問題。

- 15 本案創作具有增進功效，應具有進步性及新穎性，且該構造可供產業上利用，尚祈賜新型專利權為禱。

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訂

五、創作說明(4)

圖式說明：

第1圖：本案創作之立體分解圖。

第2圖：本案創作之側視剖面圖。

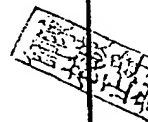
第3圖：本案創作之灌漿情形圖。

第4圖：本案創作灌漿後情形圖。

圖號說明：

1	型鋼	11	孔	12	孔
2	牆板	21	唇緣	22	孔
23	定位元件	24	膠帶	25	槽道
26	孔	27	釘	28	螺栓
29	孔				

(請先閱讀背面之注意事項再填寫本頁)



訂

六、申請專利範圍

- 1、一種隔間牆板之改良構造，其係由型鋼被豎立固定後，由其二側設孔供定位元件結合牆板，其特徵在於：
牆板由週邊形成一環唇緣，唇緣有較小厚度，使二相鄰牆板之唇緣形成凹入之槽溝，其可供膠帶黏合，及以水泥抹平，牆板內壁面係形成凹凸之非平面，牆板有數孔，孔可供釘或螺栓植入。
- 2、依申請專利範圍第 1 項所述之隔間牆板之改良構造，其牆板之內壁面係形成規則或不規則之槽道。
- 3、依申請專利範圍第 1 項所述之隔間牆板之改良構造，其釘係設有倒鉤。
- 4、依申請專利範圍第 1 項所述之隔間牆板之改良構造，牆板係設有較大直徑之孔，孔可供灌水泥漿。

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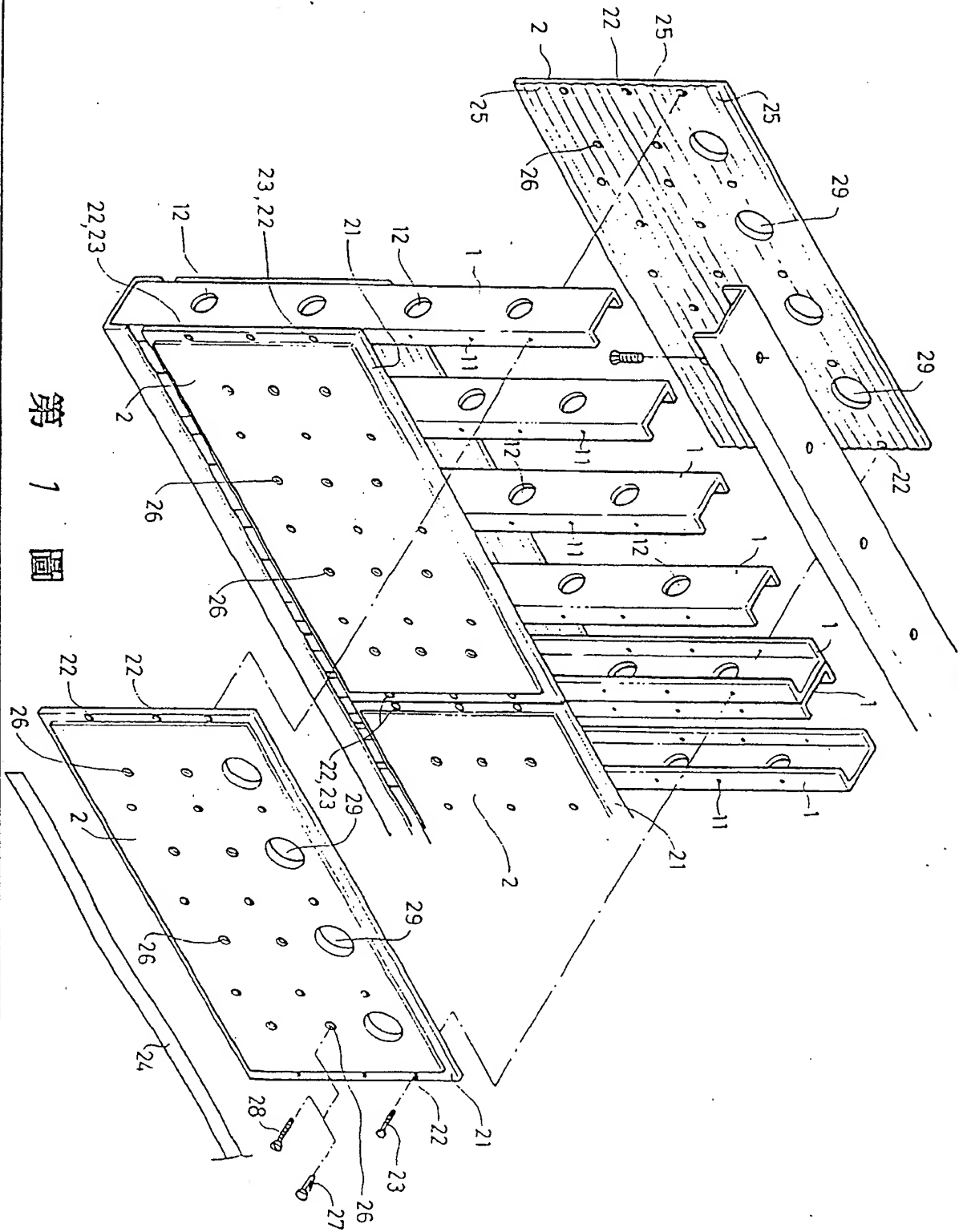
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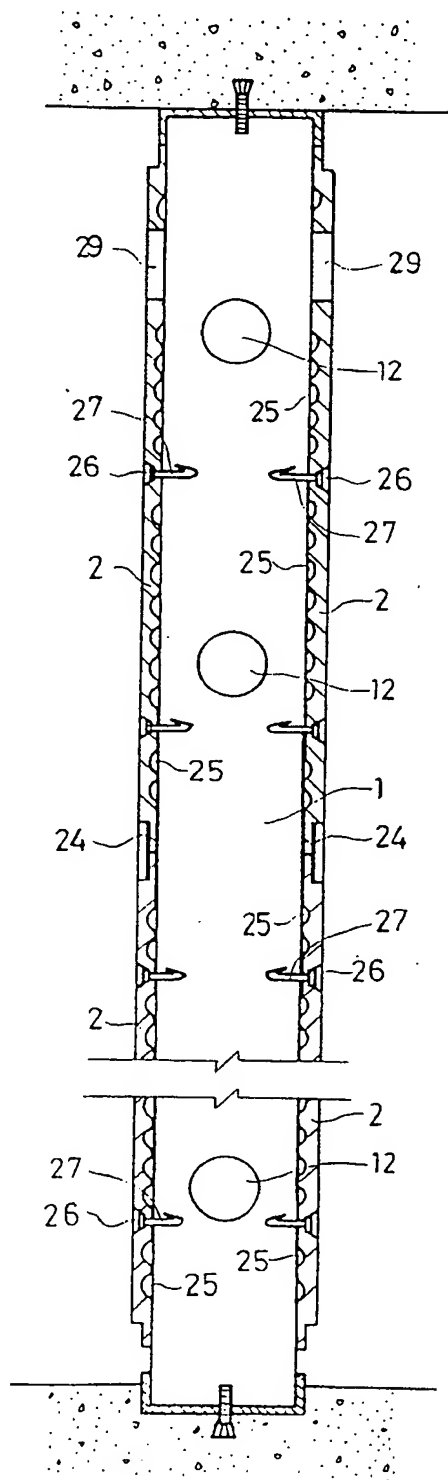
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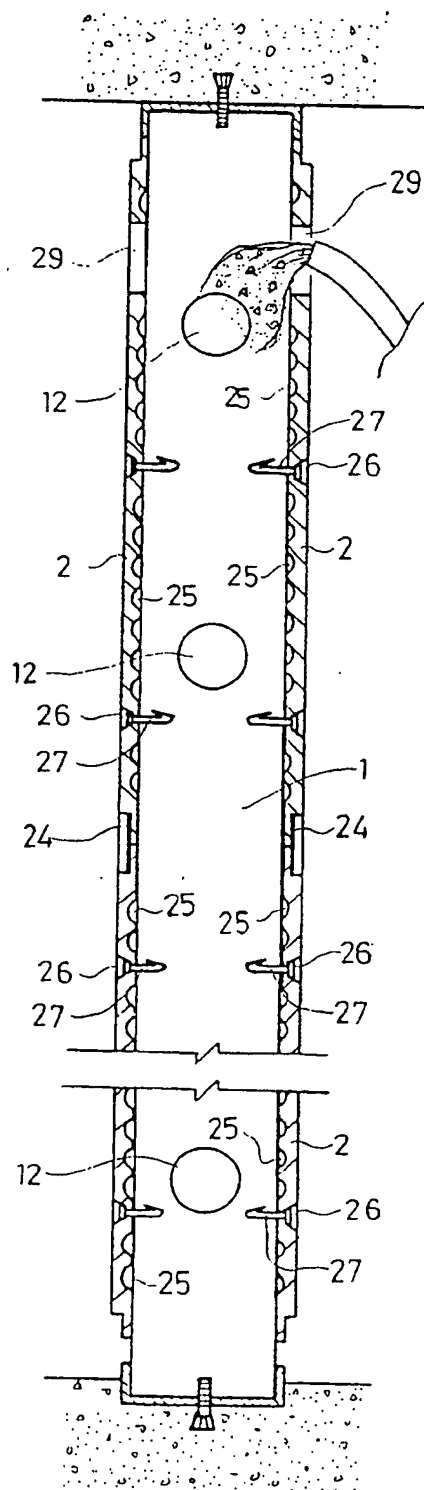


第 1 圖

圖式



第 2 圖



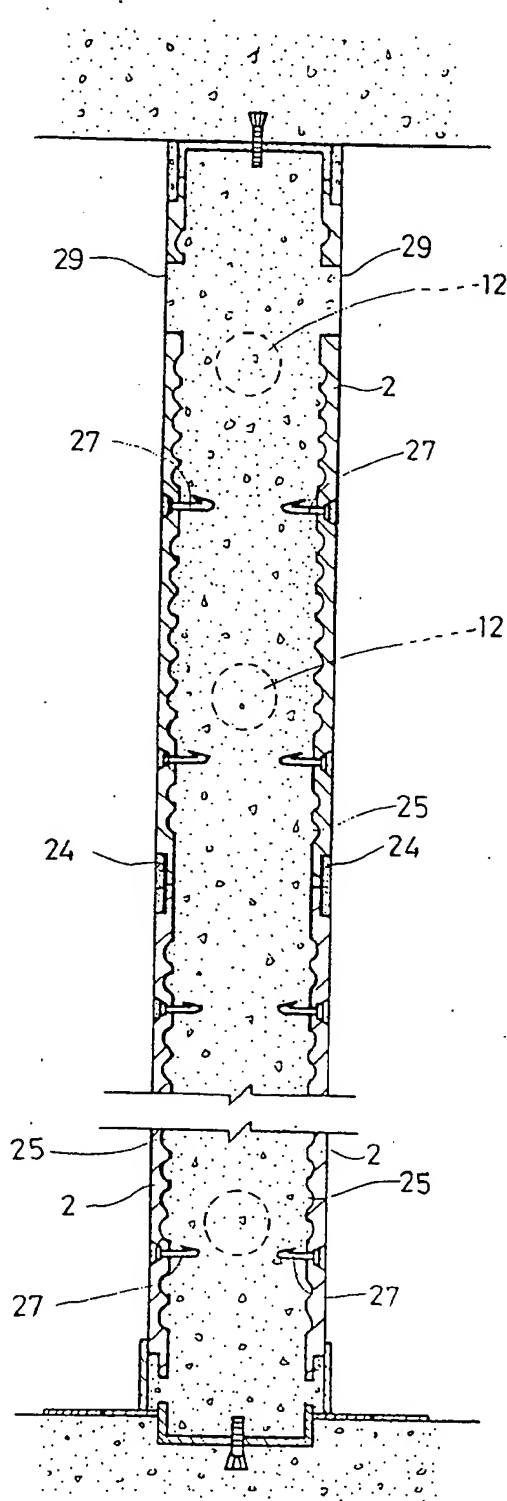
第 3 圖

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圖式



第 4 圖

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EVIDENCE 3

282800

An improved modification of a separating wall

Abstract

An improved modification of separating wall is formed by fixing modeling steel upright, with holes on both sides thereof, attaching wallboards to both sides of the modeling steel, and securing the wallboards with fixing elements fitting in the holes, wherein each wallboard has a thinner lip portion on its periphery, which forms a groove to be taped and filled with slurry between two adjacent wallboards, and the wallboards have an uneven plane on their inner surfaces and holes provided for nails or screws to be fitted in.

Background

An improved modification of separating wall is disclosed in Taiwan Patent Publication No. 221308 entitled "Construction Method for Interior Partition Wall and Metal Mesh for the Same" which shows that an interior partition wall is constructed by the steps: aligning modeling steel in columns, attaching metal mesh to one side of the modeling steel, arranging with steel bars and utility lines, attaching metal mesh to the other side of the modeling steel, two metal meshes being fixed inbetween to prevent an outward expansion, and finally filling between two metal meshes with slurry to form a partition wall. In this application, the modeling steel and the metal mesh are provided at work site for filling with slurry, and the wall surface is treated with finishing, painting and so forth. Therefore, it takes a longer time for completion of the construction. Further, there are wallboards made of various materials, which is more convenient for the subsequent finishing, painting, and so forth, so as to replace the metal mesh, but this kind of wallboards cannot bear the stress from slurry and results in deformation, fracture and so forth which may lead to an outflow of slurry or an improper coupling between the wallboards and slurry.

It is an object of the present application to provide an improved modification of separating wall for improving the above-mentioned shortcomings, which is provided with proper holes on wallboards for unnecessary water flowing out after filling of slurry, and makes a stronger combination between the wallboards and slurry.

Referring to Figure 1, according to the present application, modeling steel 1 is fixed upright, and the wallboards 2 are provided on both sides of the modeling steel 1 to form a partition wall.

The modeling steel 1 may be conventional metal beams and columns with a U-shaped section for steel structure, of which holes 11, which may be general or threaded holes, are provided, for the surfaces of the partition wall, on both sides for the modeling steel 1 to be combined with the wallboards 2 by fitting with fixing elements such as nails, screws etc. A larger surface of the modeling steel 1 is provided with holes 12 having a larger diameter which forms a passage for slurry to flow through and utility lines to pass through.

The wallboards 2 may be made of any conventional materials, of which a lip portion 21, which is provided with holes 22 for the fixing elements 23 to be fitted through so as to fix the wallboards 2 onto the modeling steel 1, is formed on the periphery, and the lip portion 21 has a smaller thickness which makes a groove, which is taped with an adhesive tape and smoothed by filling with slurry that makes a smooth and neat figure on the whole surface of the wall, formed between the lip portions 21 of two adjacent wallboards 2. The inner surface of the wallboards 2 is provided with uneven slots 25, which may be a regular or irregular arrangement to be formed as an uneven plane, and the wallboards 2 have holes 26 with a smaller diameter for riveted nails 27 or screws 28 to be fitted through. Accordingly, upon filling with slurry, the residual water can infiltrate out of the holes 26, and when slurry dries out, the riveted nails 27 or screws 28 enable the wallboards 2 and the dried-out slurry to form a solid combination. Further, for an easy filling of slurry, holes 29 with a larger diameter are provided on top portion of the wallboards 2 which can be attached to a proper position of the whole wall where slurry is filled in (as shown in Figure 3).

Upon filling in the holes 29 with slurry, the holes 29 on one side of the wall are closed by a conventional method, such as nailing down plates thereon, when getting near to filling up, and the holes 29 on the other side of the wall can be filled with non-shrinking slurry, which is also used to fill up the space between the holes 29 and a beam on top or ceiling.

Referring to Figures 2 & 3, according to the present application, upon the modeling steel 1 and the wallboards 2 being fixed, the holes 29 of the wallboards 2 on the top portion of the wall is filled in with slurry, and since the holes 26 on the wallboards 2 has been fitted with nails 27 or screws 28, the residual water can infiltrate out of gaps inbetween, and the holes 26 can be filled up by a slight amount of slurry and sands contained in the infiltrated water or can be smoothed up by a mending work, to form a neat and smooth surface.

Referring to Figure 4, upon the dried-out of slurry, the lip portions 21 between the wallboards can be taped with an adhesive tape 24, and then filled up with slurry, and thus the wallboards 2 have a smooth surface inbetween. Further, due to the fitting of the nails 27 or screws 28, an integrated solid combination is formed between the wallboards 2 and slurry, and therefore, there will be no problems for detaching of the wallboards 2.

According to the present application, the wallboards are provided with the holes 26, and thus water contained in slurry can properly infiltrate out, which can reduce the pressure from slurry. Meanwhile, since the holes 26 are fitted with the nails or screws and the inner surface of the wallboards are provided with the uneven plane, there is a better effect for the combination between the wallboards and slurry, and no detaching problems inbetween.

Brief Description of Drawings

Figure 1 is an exploded perspective view of the present invention;

Figure 2 is a cross sectional side view of the present invention;

Figure 3 is a view showing a condition upon the filling of the slurry according to the present invention; and

Figure 4 is a view showing a condition after the filling of the slurry according to the present invention.

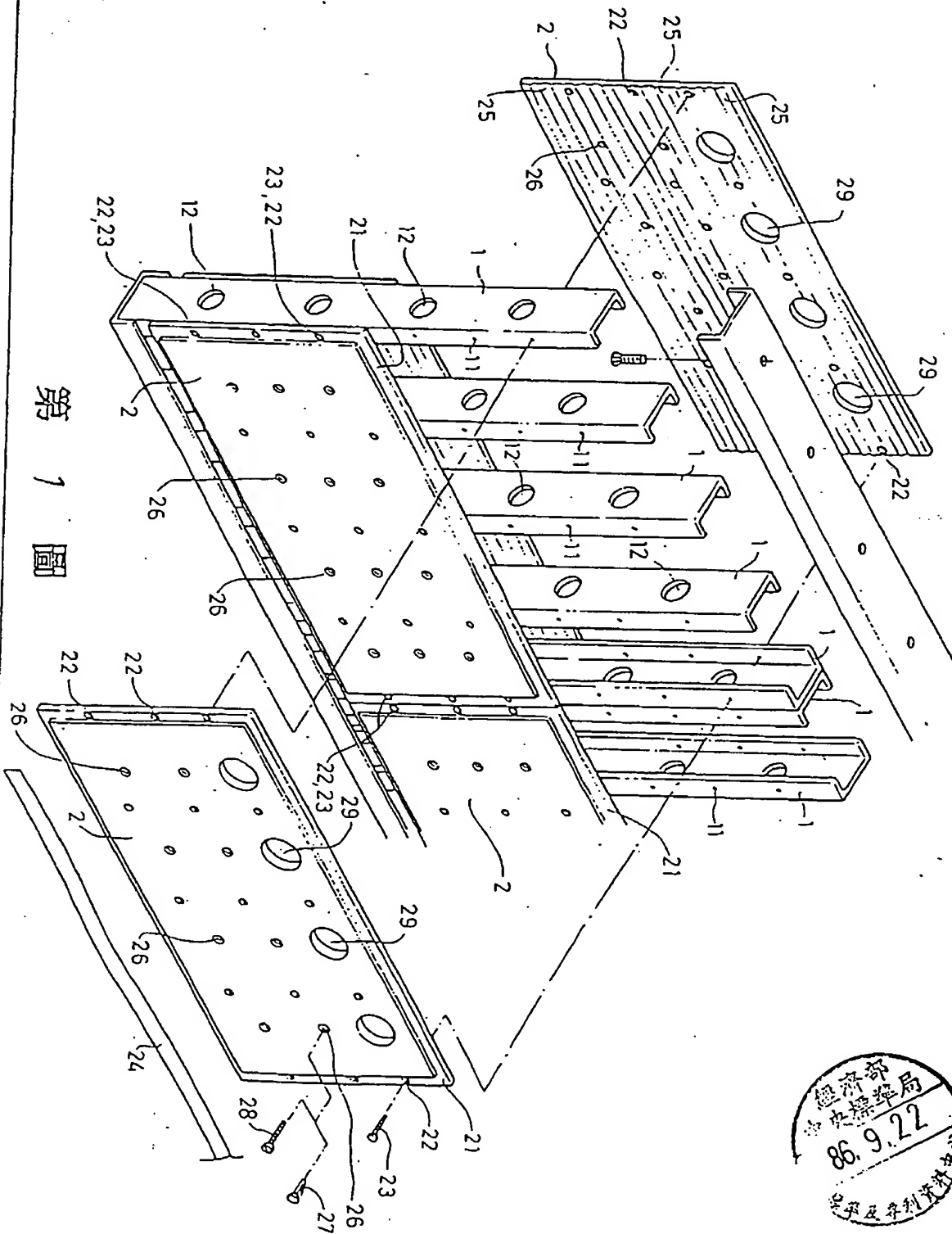
What is claimed is:

1. An improved modification of a separating wall in which holes are provided at two sides thereof for fixing elements to combine with wall sheets after section steels have been fixed, characterized by:
each of the wall sheets having an edge portion, said edge portion being thinner than other portions such that a concave slot is located between the edge portions of adjacent walls for a glue tape to stick on and for concrete to flap on, wherein an inner wall of the wall sheet has a non-flat surface and several holes are provided in the wall sheet for nails or studs to fix on.
2. The improved modification of a separating wall as claimed in claim 1, wherein said inner wall of the wall sheet is formed with regular or irregular slots.
3. The improved modification of a separating wall as claimed in claim 1, wherein said nail is provided with a reverse hook.

4. The improved modification of a separating wall as claimed in claim 1, wherein said wall sheet is provided with a hole having a larger diameter for filling the slurry.

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圖式



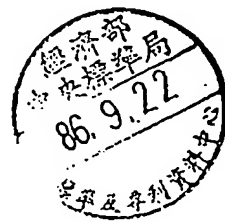
第 1 圖

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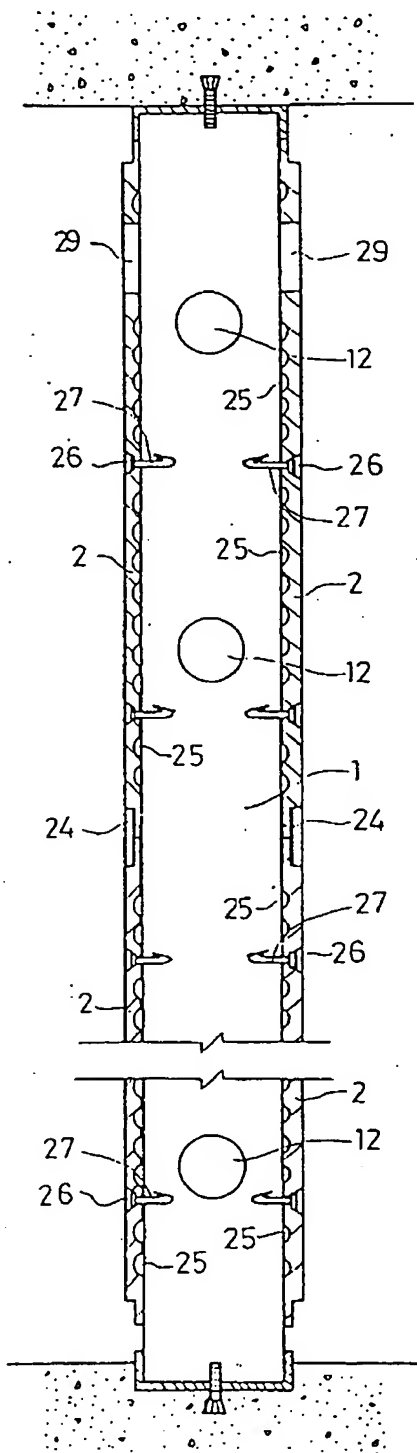
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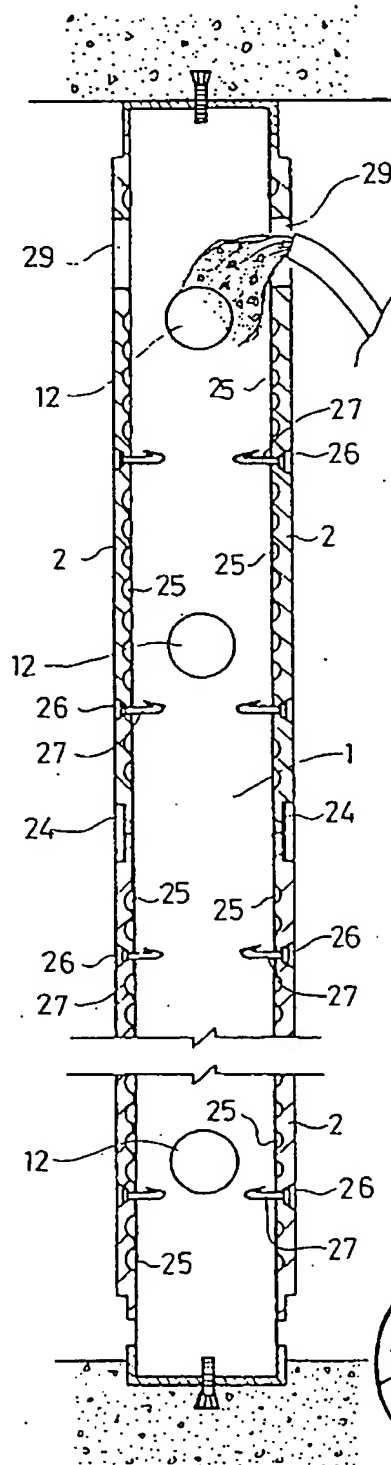
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圖式



第 2 圖



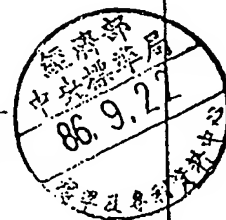
第 3 圖

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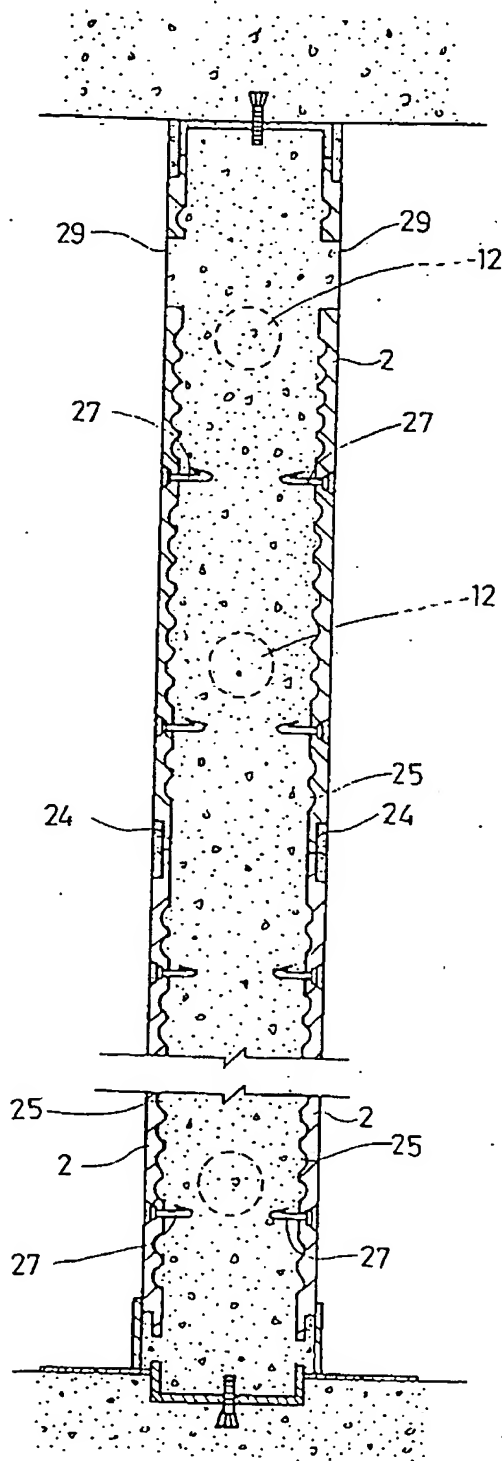
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圖式



第 4 圖

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